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**United States
Department of
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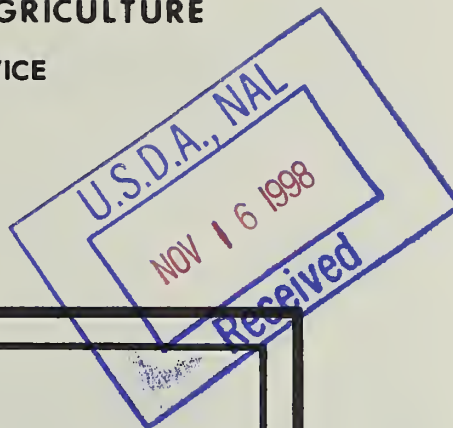


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**UNITED STATES
STANDARDS**


for grades of

FROZEN GRAPEFRUIT



EFFECTIVE FEBRUARY 20, 1948

First Issue



This is the first issue of the United States Standards for Grades of Frozen Grapefruit. These standards are issued by the Department after careful consideration of all data and views submitted.

These standards were recodified in the Federal Register of December 9, 1953 (18 F.R. 7989) and no change was made except in the format. Section 52.1179 was amended (22 F.R. 3535) to become effective July 1, 1957.

As in the case of other standards for processed fruits and vegetables, these standards are designed to serve as a convenient basis for sales, for establishing quality control programs, and for determining loan values. They will also serve as a basis for the inspection of this commodity by Federal Inspection service, which is available for the inspection of other processed products as well.

The Department welcomes suggestions which might aid in improving these standards in future revisions. Comments may be submitted to, and copies of these standards obtained from:

Chief, Processed Products Standardization
and Inspection Branch
Fruit and Vegetable Division
Agricultural Marketing Service
United States Department of Agriculture
Washington 25, D. C.

UNITED STATES STANDARDS FOR GRADES OF FROZEN GRAPEFRUIT¹

Effective February 20, 1948

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PRODUCT DESCRIPTION AND GRADES

§ 52.1171 *Product description.* Frozen grapefruit is prepared from the matured fruit of the grapefruit tree (*Citrus paradisi*), after the fruit has been washed and peeled, and has been separated into segments by removing the core, seeds, and membrane; may be packed with or without packing media; and is frozen and stored at temperatures necessary for the preservation of the product.

§ 52.1172 *Grades of frozen grapefruit.*

(a) "U. S. Grade A" or "U. S. Fancy" is the quality of frozen grapefruit of which not less than 75 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a practically uniform, bright, typical color; that is practically free from defects;

that possesses a good character; that possesses a normal flavor and odor; and scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U. S. Grade B" or "U. S. Choice" is the quality of frozen grapefruit of which not less than 50 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a reasonably uniform and reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; that possesses a normal flavor and odor; and scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U. S. Broken" is the quality of frozen grapefruit of which less than 50 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a reasonably uniform and reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; that possesses a normal flavor and odor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U. S. Grade D" or "Substandard" is the quality of frozen grapefruit that fails to meet the requirements of U. S. Grade B or U. S. Choice and U. S. Broken.

FACTORS OF QUALITY

§ 52.1173 *Ascertaining the grade.* (a) The grade of frozen grapefruit is determined immediately after thawing to the extent that the units may be separated easily. Such grade may be ascertained

¹ The requirements of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act.

by considering, in addition to the requirements of the respective grade, the following factors: Wholeness, color, absence of defects, and character.

(b) The relative importance of each factor has been expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

| Factors: | Points |
|--------------------------|--------|
| Wholeness | 20 |
| Color | 20 |
| Absence of defects | 30 |
| Character | 30 |
| Total score | 100 |

(c) "Normal flavor and odor" means that the grapefruit is free from objectionable flavors, off flavors, and objectionable odors of any kind.

§ 52.1174 *Ascertaining the rating of each factor.* The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1175 *Wholeness—(a) Definitions.* (1) "Whole" or "whole segment" means any segment that retains its apparent original conformation, is not excessively trimmed, and weighs not less than $\frac{3}{8}$ ounce. A whole segment that is excessively trimmed or that weighs less than $\frac{3}{8}$ ounce is considered a broken segment.

(2) "Almost whole" or "almost whole segment" means any portion of a segment that is not less than 75 percent of the apparent original segment size, is not excessively trimmed, and weighs not less than $\frac{3}{8}$ ounce. An almost whole segment that is excessively trimmed or that weighs less than $\frac{3}{8}$ ounce is considered a broken segment.

(3) "Broken" or "broken segment" means a portion of a segment that is less than 75 percent of the apparent original segment size, a whole or almost whole segment that is excessively trimmed, a

whole or almost whole segment that weighs less than $\frac{3}{8}$ ounce, and portions of segments that are joined together only by a "thread" or membrane.

(b) (A) *classification.* Frozen grapefruit that consists of not less than 75 percent by weight of units that are whole or almost whole segments may be given a score of 18 to 20 points.

(c) (B) *classification.* If the frozen grapefruit consists of at least 50 percent but less than 75 percent by weight of units that are whole or almost whole segments, a score of 16 or 17 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U. S. Grade B or U. S. Choice, regardless of the total score for the product (this is a limiting rule).

(d) (Broken) *classification.* If the frozen grapefruit consists of less than 50 percent by weight of the units that are whole or almost whole segments, a score of 0 to 15 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U. S. Broken, regardless of the total score for the product (this is a limiting rule).

(e) *General.* The evaluation of the score points for the factor of wholeness may be determined from Table No. I of this paragraph which indicates the score range in the respective grades and denotes the minimum requirement for whole or almost whole segments and the maximum allowances for broken segments for the score indicated.

TABLE No. 1

| Grade | Score points | Whole or almost whole segments | Broken segments |
|--------------------------------|--------------|--------------------------------|----------------------------|
| | | <i>Minimum (by weight)</i> | <i>Maximum (by weight)</i> |
| U. S. Grade A or U. S. Fancy. | 20 | 100% | 0% |
| | 19 | 85% | 15% |
| | 18 | 75% | 25% |
| U. S. Grade B or U. S. Choice. | 17 | 60% | 40% |
| | 16 | 50% | 50% |
| | 15 | 45% | 55% |
| | 14 | 40% | 60% |
| | 13 | 35% | 65% |
| | 12 | 30% | 70% |
| | 11 | 25% | 75% |
| | 10 | 20% | 80% |
| | 9 | 15% | 85% |
| U. S. Broken----- | 8 | 10% | 90% |
| | 7 | 5% | 95% |
| | 6 | 0% | (1) |
| | 5 | 0% | (1) |
| | 4 | 0% | (1) |
| | 3 | 0% | (1) |
| | 2 | 0% | (1) |
| | 1 | 0% | (1) |
| | 0 | 0% | (1) |

¹ Large to small: 100% and depending on size of broken units.

§ 52.1176 *Color*—(a) *General*. Federal inspection certificates may designate pink grapefruit whenever that fact is determined.

(1) The uniformity and intensity of the typical color is considered in determining the factor of color.

(b) (A) *classification*. Frozen grapefruit that possesses a practically uniform, bright, typical color may be given a score of 18 to 20 points. "Practically uniform, bright, typical color" means that the grapefruit may possess not more than a slight variation from the typical color of properly matured grapefruit or pink grapefruit from which prepared.

(c) (B) *classification*. If the frozen grapefruit possesses a reasonably uniform and reasonably good color, a score of 16 or 17 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U. S. Grade B or U. S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably uniform and reasonably good color" means that the grapefruit may be variable in color, is fairly bright, and is not off color.

(d) (SStd) *classification*. Frozen

grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1177 *Absence of defects*—(a) *General*. The factor of absence of defects refers to the degree of freedom from harmless extraneous material, from seeds, from portions of covering membrane, and from damaged units.

(1) "Harmless extraneous material" means leaves, small pieces of peel, and other similar material.

(2) "Seed" means any seed, whether or not fully developed, that measures more than $\frac{3}{16}$ inch in any dimension. A "large seed" is one that may be plump and measures more than $\frac{3}{8}$ inch in any dimension.

(3) "Damaged unit" means any unit that is damaged by pathological injury, by lye peeling, by discoloration, or by similar injury or that is damaged to such an extent that the appearance or eating quality of the unit is seriously affected.

(b) (A) *classification*. Frozen grapefruit that is practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that no harmless extraneous material is present; that not more than 5 percent by weight of the grapefruit may be damaged units; and that for each 16 ounces of net weight there may be present:

(1) Not more than 6 seeds including not more than 1 large seed; and

(2) Not more than an aggregate area of 1 square inch on the units covered by membrane.

(c) (B) *classification*. If the frozen grapefruit is reasonably free from defects, a score of 24 to 26 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U. S. Grade B or U. S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that not more than 10 percent by weight of the grape-

fruit may be damaged units; and that for each 16 ounces of net weight there may be present:

(1) Not more than 1 small piece of harmless extraneous material;

(2) Not more than 12 seeds including not more than 3 large seeds; and

(3) Not more than an aggregate area of 2 square inches on the units covered by membrane.

(d) (*SStd*) classification. Frozen grapefruit that fails to meet the require-

ments of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

(e) *General*. The evaluation of the score points for the factor of absence of defects may be determined from Table No. II of this paragraph which indicates the maximum allowances for each type of defect for the score indicated.

TABLE NO. II

| Grade and score points | Harmless extraneous material | Damaged units | Seeds | Aggregate area covered by membrane |
|---|------------------------------|---------------|---|------------------------------------|
| | Maximum | | | |
| | Per 16 ounces | By weight | Per 16 ounces | |
| U. S. Grade A or U. S. Fancy: | | | | |
| 30..... | None..... | 1% | None..... | None. |
| 29..... | None..... | 2% | 2, but no large seeds..... | $\frac{1}{2}$ square inch. |
| 28..... | None..... | 3% | 4, but no large seeds..... | $\frac{3}{4}$ square inch |
| 27..... | None..... | 5% | 6, including 1 large seed..... | 1 square inch. |
| U. S. Grade B or U. S. Choice and Broken: | | | | |
| 26..... | 1 small piece..... | 7% | 8, including 1 large seed..... | $1\frac{1}{2}$ square inches. |
| 25..... | 1 small piece..... | 9% | 10, including 2 large seeds..... | $1\frac{3}{4}$ square inches. |
| 24..... | 1 small piece..... | 10% | 12, including 3 large seeds..... | 2 square inches. |
| U. S. Grade D or Substandard: | | | | |
| 23 or less..... | | | More than allowances permitted for 24 points. | |

§ 52.1178 *Character*—(a) *General*. The factor of character refers to the structure and condition of the cells and reflects the maturity of the grapefruit.

(b) (*A*) classification. Frozen grapefruit that possesses a good character may be given a score of 27 to 30 points. "Good character" means that the grapefruit is moderately firm and fleshy; that the segments possess a well-developed, juicy, cellular structure; that the product is fairly free from loose cell sacs; and that not more than 5 percent by weight of the grapefruit consists of soft, fibrous, or "ricey" segments.

(c) (*B*) classification. If the frozen grapefruit possesses a reasonably good character, a score of 24 to 26 points may

be given. Frozen grapefruit that falls into this classification shall not be graded above U. S. Grade B or U. S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the grapefruit is fairly firm and fleshy and that not more than 15 percent by weight of the grapefruit consists of soft, fibrous, or "ricey" segments.

(d) (*SStd*) classification. Frozen grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above U. S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1179 *Ascertaining the grade of a lot.* The grade of a lot of frozen grapefruit covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.1180 *Score sheet for frozen grapefruit.*

| Size and kind of container..... | | |
|--|--------------|--|
| Container code or marking..... | | |
| Label (style of pack: ratio of fruit-sugar, etc., if shown)..... | | |
| Net weight..... | | |
| Color (if "pink" varieties)..... | | |
| Factors | Score points | |
| Wholeness..... | 20 | { (A) 18-20 (B) ¹ 16-17 (Bkn) ¹ 0-15 |
| Color..... | 20 | { (A) 18-20 (B) ¹ 16-17 (D) ¹ 0-15 |
| Absence of defects..... | 30 | { (A) 27-30 (B) ¹ 24-26 (D) ¹ 0-23 |
| Character..... | 30 | { (A) 27-30 (B) ¹ 24-26 (D) ¹ 0-23 |
| Total score..... | 100 | |
| Normal flavor and odor..... | | |
| Grade..... | | |

¹ Indicates limiting rule.

Recodified in the Federal Register of December 9, 1953 (18 F.R. 7989)

Section 52.1179 amended May 22, 1957 (22 F.R. 3535)

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